Cassette Portfolio Analysis

Catalog Number 26-1506



The Radio Shack® Cassette Portfolio Analysis system lets you maintain a current record and analysis of your investments in Stocks, Bonds, Funds, and Options. It can be useful to the investor with an active portfolio or by the novice who wants to learn more about the stock market. Key factors are automatically computed to help you analyze each security (yield, total market value and unrealized gain/loss). The graphic performance feature lets you compare your stock's performance to overall market trends. A summary of total investments in Stocks, Bonds, and Funds is provided. Purchase and selling prices and dates are kept and the gain/loss is computed.

The Cassette Portfolio Analysis system is designed for use with the TRS-80 16K Level II Microcomputer System consisting of the following equipment:

- The TRS-80 16K Level II Keyboard
- The TRS-80 Video Monitor
- The TRS-80 Cassette Recorder
- Optional Printer (80 Column) to obtain a "hard copy" of your reports

Cassette Portfolio Analysis



First Edition 1980

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Introduction

The Radio Shack[®] Cassette Portfolio Analysis System lets you maintain a current record and analysis of your investments in Stocks, Bonds, Funds, and Options.

The active investor will find the program useful, as will the novice, by learning more about the fascinating world of the Stock Market. The system may be used for actual or practice investments. It will hold the following number of Securities:

- 20 Current Stocks
- 10 Current Bonds
- 5 Current Funds
- 10 Current Options

In addition to the above, information is also maintained on issues sold so that Year-to-Date reports can be shown on the video screen.

Information is maintained for:

- 25 Stock Sales
- 15 Bond Sales
- 10 Fund Sales
- 30 Terminated Options

Appendices A, B and C include explanations and definitions of investment terminology which can be extremely helpful in understanding the program. Appendices D and E will provide further explanations of how the program works. There are many aspects of investing that could not be covered in the program. It does, however, offer an easy-to-understand package of basic information needed to set up your own investment portfolio.

This manual will show you, step-by-step, how to set up a sample portfolio and perform daily transactions.

The Cassette Portfolio Analysis System is designed for use with the TRS-80 16K Level II Microcomputer System consisting of the following equipment:

- * The TRS-80 16K Level II Keyboard
- * The TRS-80 Video Monitor

Introduction (continued)

- * The TRS-80 Cassette Recorder
- * Optional Printer (80 Column) to obtain a "hard copy" of your reports

The Cassette Portfolio Analysis system consists of five cassettes:

- * Two Portfolio Program cassettes
- * The Portfolio Data cassette (blank)
- * The Index Data cassette (blank)
- * The Option Data cassette (blank)

Features

- Can be used by the investor with an active portfolio or by the novice with a "paper" portfolio.
- Automatically computes key factors which help you to analyze each security (yield, total market value, and unrealized gain/loss).
- Graphically compares performance between stock holdings and the Standard & Poor's 500 (or any other financial index). This feature allows you to compare your stock's performance to overall market trends.
- Provides a summary of the total investments in stocks, bonds and funds. The summary includes their total market value, the estimated annual income, and the percentage of investments in each type of security. This information provides a comparison with current investments.
- Purchase and selling prices and dates are kept and the gain/loss is computed.
- If your system has a printer you may obtain a printout of the following portions of the program:
 - 1) All Summary Program Reports
 - 2) Index Data Report (Index Program)
 - 3) All screen displays for the Options Program

How to Run the TRS-80

Follow these steps:

- 1) Turn on the TRS-80 Video Screen
- 2) Turn on the TRS-80 Keyboard

The screen will show:

You type:

MEMORY SIZE?_

Press **ENTER**

READY

>_

Whenever READY >_ is shown on the screen you may "Load" and "Run" any other tape program without turning on the keyboard and the screen again. The following sections describe the steps required to buy, sell and update Stocks, Bonds and Funds.

Setting Up a Portfolio

To set up the sample portfolio, or whenever you wish to buy, sell or update the current value on Stocks, Bonds or Funds, follow these steps:

When the screen shows:

READY

>__

- 1) Insert the Portfolio Main Program Transactions tape into the cassette recorder.
- 2) Rewind the tape.
- 3) Depress the "PLAY" key.
- 4) Type CLOAD and press ENTER.

After the program has loaded, the screen will show:

READY

>__

5) Type RUN and press ENTER.

The screen will show:

MAIN PORTFOLIO PROGRAM

ENTER TODAY'S DATE | | | | | | | | |

Enter the date in MM/DD/YYYY format. For the example, use the date provided. Type **@6/112/11979**.

Press **ENTER**. (The key may be used to make corrections to any entry before you press the **ENTER** key.) If you made an error in the date entry the **||||||||||** display will reappear and you will have to retype the date. There must be two numbers for the month, two for the day and four for the year.

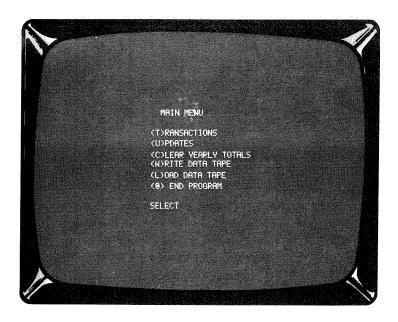
The month must be a number from $\emptyset 1$ to 12.

The day must be a number from 01 to 31.

The year must be from 1900 to 2100.

Main Menu

The screen will show:



The Main Portfolio Menu is like a "Table of Contents". This is what each choice lets you do:

(T)RANSACTIONS	Lets you enter information on Stocks,
	Bonds and Funds as you buy and sell.

(U)PDATES Lets you update current information for

Stocks, Bonds and Funds.

(C) LEAR YEARLY TOTALS Clears the year-to-date totals and

transactions for the sale of Stocks, Bonds

and Funds.

(W) RITE DATA TAPE Writes a cassette tape which holds the

current portfolio information.

(L)OAD DATA TAPE

Loads a portfolio data tape previously

written.

(@)END PROGRAM Lets you end the Main Portfolio Program.

(Never end the program by simply turning

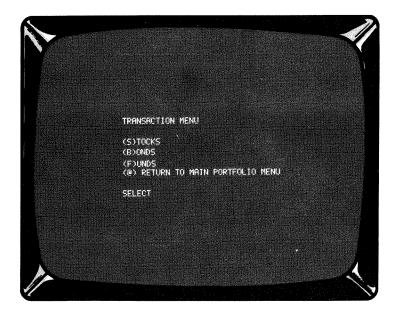
the power off.)

A sample portfolio will be built using the instructions in the next section.

Buying Stocks

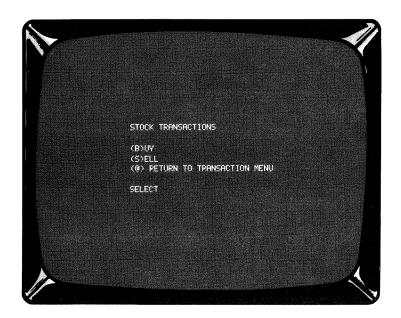
 ${\bf Press} {\color{red}\overline{\bf T}} {\bf for} \ {\color{red}\underline{\bf T}} {\bf ransactions}.$

The screen will show:



You will be dealing with Stocks, so type S.

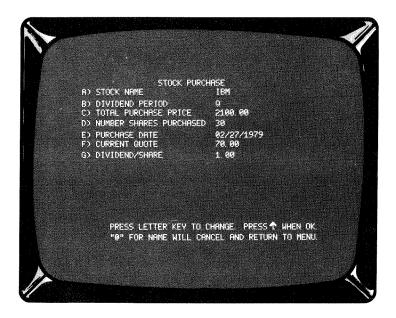
The screen will show:



Buying Securities (continued)

Press B , to <u>B</u> uy a Stock from the Stock Transaction Menu.		
The screen will show:	You type:	
STOCK NAME	[]BM and press ENTER	
The number of boxes lets you know how many letters you can type. (If you make a typing mistake, use the key for backspacing.)		
Note: You may keep a record of state taxes or other fees by simply abbreviating the Stock name and entering the amount in the remaining spaces. This is for record keeping only, and will not be computed in the gain/loss feature of the program. For example: I B M 6 5 . \emptyset \emptyset		
The screen will show:	You type:	
DIVIDEND PERIOD_	(i) and press ENTER	
You may choose from three letters: Of for Quarterly, Sfor Semi-Annually, and A for Annually. If the company does not pay dividends, press A for Annually and enter 3's for Dividend/Share when asked.		
The screen will show:	You type:	
TOTAL PURCHASE PRICE	2100.00 and press ENTER	
This figure is the total purchase price of the stock(s) bought; the maximum value which may be entered is 999,999.99 for any purchase.		
The screen will show:	You type:	
NUMBER SHARES PURCHASED	30 and press ENTER	
For all purchases, the number typed must be greater than zero.		
The screen will show:	You type:	
PURCHASE DATE	02 /27/1979 and press ENTER	
CURRENT QUOTE	70.00 and press ENTER	
DIVIDEND/SHARE	1.00 and press ENTER	
Note: The annual dividend per share of stock is 4.00 in this case, since you chose a quarterly dividend period.		

The screen will now show:



At this point, any of the entries made may be changed by pressing the letter on the keyboard which represents that particular information. Type the correct information, and press **ENTER**. (If you want to cancel the entire transaction, press for Stock name, type , and press **ENTER**. You will be returned to the Transaction Menu. Try this and then re-enter the IBM transaction.

Caution: Make sure all entries are correct. Mistakes made now will affect all future entries. Adjustments to these figures can only be made using the Sell function on the same date as purchased and the same price.

When all information for IBM is correct, press to enter the purchase. The Stock Transaction Menu will be shown again. You can enter up to 20 different purchases and 25 sales when entering your own information.

Press @ to return to the Transaction Menu so you can buy a Bond.

Buying Securities (continued)

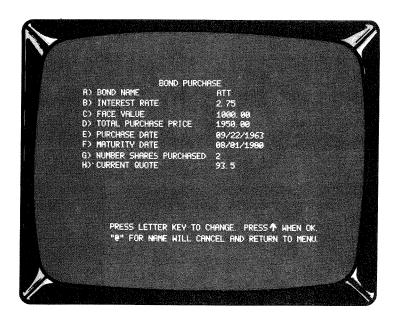
Buying Bonds

Press B from the Transaction Menu. The Bond Transaction Menu will show the same choices as the Stock Transactions Menu. Press B (for Buy). Enter the following information for a sample Bond Purchase the same way you did for a Stock Purchase.

The screen will show:	You type:
BOND NAME	ATT and press ENTER Note: You can note taxes or other fees here. Example: ATT15.00
INTEREST RATE	2.75 and press ENTER
FACE, VALUE	1000.00 and press ENTER
TOTAL PURCHASE PRICE	1950.00 and press ENTER
PURCHASE DATE	Ø9 / 22 / 1963 and press ENTER
MATURITY DATE	Ø8 / Ø1 / 198Ø and press ENTER
NUMBER SHARES PURCHASED	2 and press ENTER
CURRENT QUOTE	93.5 and press ENTER

The NUMBER SHARES PURCHASED is simply the number of Bonds purchased. The CURRENT QUOTE is the current price of a Bond, stated as a percentage of its face value. The INTEREST RATE is the rate stated on a bond and is entered as a percentage of face value. You can enter up to 10 Bond purchases and up to 15 sales.

The screen will show:



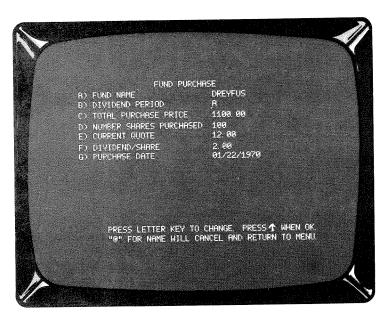
Make any necessary changes. Again, be sure the entries are correct, as they will affect all future transactions. When correct, press the 1 to enter the purchase. Press@to return to the Transaction Menu to buy a Fund.

Buying Funds

Press from the Transaction Menu. Then press **B**(for <u>Buy</u>) from the Fund Transaction Menu. Now, enter the following sample Fund purchase:

You type: The screen will show: DREYFUS and press ENTER FUND NAME_ _ _ _ _ Note: To enter taxes or other fees — Example: **DRY57.00** A and press ENTER DIVIDEND PERIOD_ 1100.00 and press ENTER TOTAL PURCHASE PRICE_____ 100 and press ENTER NUMBER SHARES PURCHASED_____ **12.00** and press **ENTER** CURRENT QUOTE_____ 2.00 and press ENTER DIVIDEND/SHARE_____ **Ø1**/22/197**Ø** and PURCHASE DATE_____ press **ENTER**

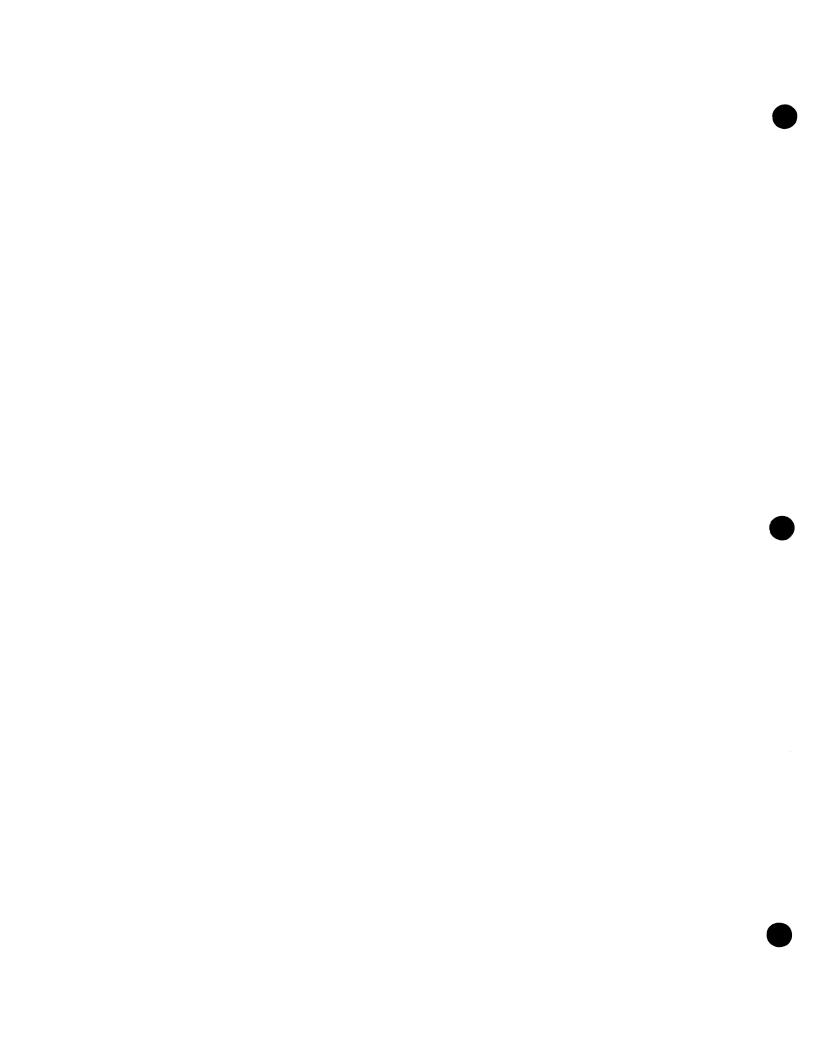
The screen will show:



The NUMBER SHARES PURCHASED refers to the units of Funds purchased. Make sure that all entries are correct and then press the 1 to enter purchase. Press 1 to return to the Transaction Menu. Since you have now purchased and entered one of each type of security, press 1 to return to the Main Portfolio Menu. You may enter up to 5 Fund purchases and 10 sales.

Portfolio Full

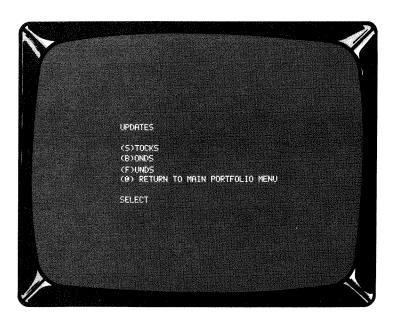
Any time you press (for Buy) from the Stock, Bond or Fund Transaction Menu, and the message INVALID ACTION appears, you have reached the maximum number of Stocks, Bonds or Funds which can be held at one time. Before buying any more of that type of security, a sale of that security must take place. This will leave room for the purchase. Later, you will go through a sale, but first let's update the information you have entered so far.



Updating Securities

To Update any security, press from the Main Portfolio Menu.

The screen will show:



Whenever you attempt to update a particular type of security (i.e. Stocks, Bonds, or Funds) that does not exist, the screen will show:

INVALID ACTION. PRESS "O" TO RETURN TO MAIN

PORTFOLIO MENU

Updating Stocks

Press S (for Stocks) from the Updates Menu. A list of each stock held will be shown along with a letter identifying each. (The Updates Menu will be returned if is pressed at this time.) For now, it will only be one stock. Press for IBM. You will be asked for the following information:

The screen will show:

You type:

IBM

DIVIDEND PERIOD Q

A and press **ENTER**(This changes the Dividend Period to A for Annual.)

Updating Securities (continued)

The screen will show:

You type:

CURRENT QUOTE 7Ø

Press**ENTER**. (This will leave 70

as the correct figure.)

DIVIDEND/SHARE 1

3 and press **ENTER**. (This changes the annual dividends received per share to 3.00.)

The list of current Stocks will reappear. Return to the Updates Menu by pressing the key.

Continue with the next example to Update a Bond.

Updating Bonds

Press **B** from the Updates Menu. The screen will show the list of currently held Bonds.

Since you have only one Bond, press Afor ATT. (Pressing@will return you to the Updates Menu). The screen will then ask for the Current Quote to be updated.

The screen will show:

You type:

BOND NAME ATT

PURCHASE DATE 9/22/1963

CURRENT QUOTE 93.5

95 and press **ENTER**. (This changes the current quote to 95%.)

The screen will again show all holdings of Bonds. Press@to return to the Updates Menu.

Updating Securities (continued)

Updating Funds

Press F to Update a Fund. A list of all Funds held will be shown on the screen. You may choose the one to be updated. Our example only has one Fund, so press for Dreyfus.

The screen will show:

You type:

FUND NAME DREYFUS

DIVIDEND PERIOD A

Press **ENTER**

TOTAL PURCHASE PRICE 1100.00

Press **ENTER**

NUMBER SHARES PURCHASED 100.00

Press **ENTER**

CURRENT QUOTE 12

15 and press ENTER

DIVIDEND/SHARE 2

Press **ENTER**

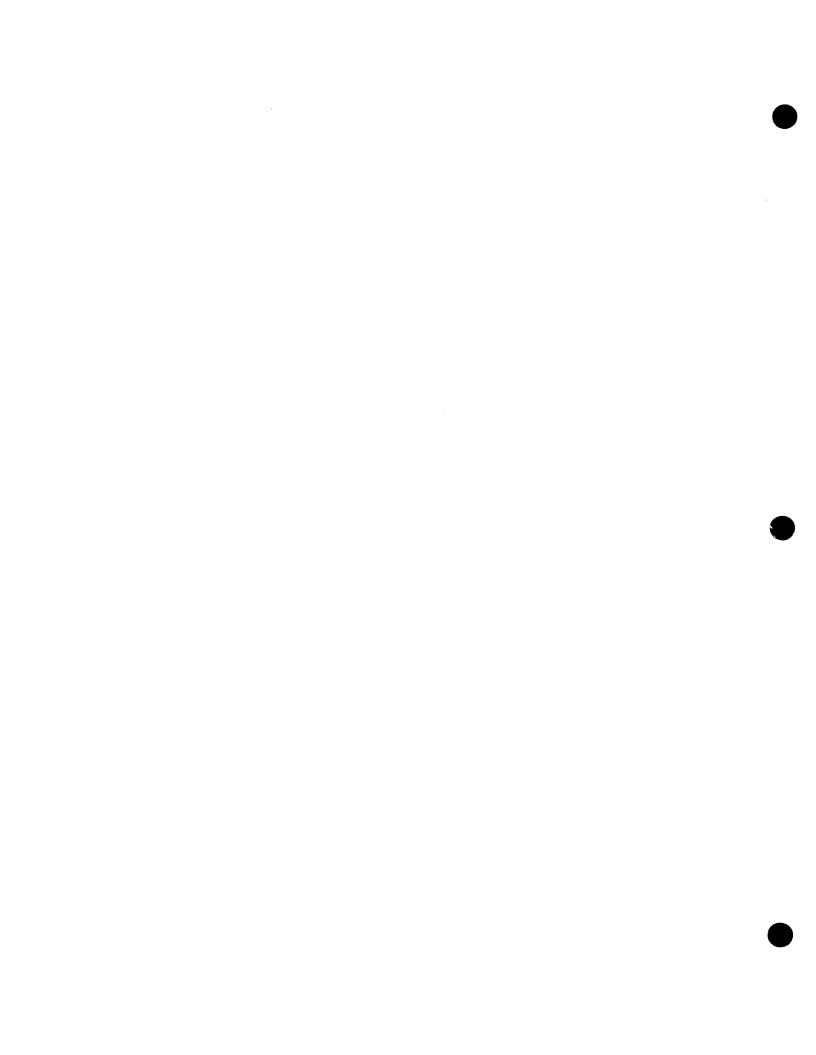
In this Update, only the Current Quote was changed. Since you may be investing periodically in Funds, the total purchase price and the number of shares (Units of Funds) purchased may change. Exact figures for this information should be available from the fund manager or periodic statements you receive which detail your investments.

Some Fund dividends are paid daily and will increase the amount of Funds owned on a daily basis. These will need to be considered when entering an Update Transaction.

Press@to return to the Updates Menu. Since each type of security has been updated, press@again to return to the Main Portfolio Menu.

Stock Splits

If a stock you hold splits, write down the number of shares you currently hold, and the original purchase price. Use the procedures in a Stock sale, entering the same values when purchased for number of shares sold, selling price and effective date of the stock split. This will clear the stock. Next, proceed to a stock purchase and enter the information representing the number of shares held after the split. The price for this purchase should be the total purchase price which was originally entered.



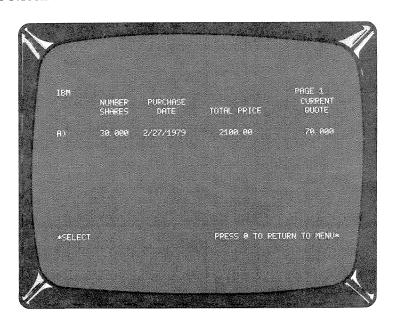
Selling Securities

All sales are made from the Transactions Menu, as were all purchases. Press $\boxed{\mathbb{T}}$ to go to the $\boxed{\mathbb{T}}$ ransactions Menu.

Selling Stocks

From the Transactions Menu, press S. This will show the Stock Transactions Menu. This time we'll be selling stock, so press S. The screen will show a list of the names of all currently held stocks. Press the letter representing the stock you wish to sell. (Pressing@will return you to the Stock Transactions Menu.) In this case, press Afor IBM to sell some of your holdings.

The screen will show:



When shares of the same stock are bought at different dates and prices, you may have more than one entry. In the example, all the shares were purchased at one time. Press A. The screen will then ask for information regarding the sale. Enter the information given below.

The screen will show:	You type:
IBM	
SELL DATE	Ø672271979 and press ENTER
NUMBER TO SELL	15 and press ENTER

Selling Securities (continued)

Note: If you attempt to sell more shares than the number held, the current holdings of that stock will return to the screen, and you must choose which to sell again (note the number of shares held).

TOTAL RECEIVED_____

1100.00 and press **ENTER**

You have just sold 15 shares of IBM. If you enter for the number of shares to sell, you will be able to exit the transaction without affecting your current holdings. Now, press@from the Stock Transaction Menu to return to the Transactions Menu.

If you sell stock on the same date and at the same price you purchased it, it will be considered an adjustment. In this case, a transaction will not be recorded but, the number of shares will be adjusted. This is only applicable to stocks.

Selling Bonds

From the Transaction Menu, press **B**. The Bond Transaction Menu will be shown. Press **S**. The screen will show the list of all bonds. Press the letter representing the bond you wish to sell. In this case, press **A** for ATT.

The screen will show:	You type:
ATT 2.000 HELD	
NUMBER TO SELL	1 and press ENTER
SELL DATE	07/22/1979 and press ENTER
TOTAL RECEIVED	1001.00 and press ENTER

The sale is complete. Press@to return to the Transactions Menu.

Selling Securities (continued)

Selling Funds

Press F from the Transaction Menu. Now, press for Sell. A list of all Funds held will be shown. Press the letter representing the fund you wish to sell. In this case, press for Dreyfus and enter the following sale information.

The screen will show:	You type:
DREYFUS 100.000 SHARES HELD	
NUMBER TO SELL	[5] and press ENTER
SELL DATE	Ø6 [/][6]//[1] 9 [7] 9 and press ENTER
TOTAL RECEIVED	600.00 and press ENTER

Now that the sale is completed, press@to return to the Transactions Menu. Press@once more to return to the Main Menu.

Writing a Data Tape

In order to obtain reports on the portfolio you just built, the information needs to be placed on the Portfolio Data tape. A new tape should be saved whenever securities are bought, sold or updated.

Press M from the Main Portfolio Menu.

The screen will show:

WRITE DATA TAPE

SET TO RECORD

PRESS <ENTER> WHEN RECORDER READY

If you change your mind and decide not to save a tape, you can press@and the Main Portfolio Menu will be shown. Otherwise, follow these directions:

- 1) Insert the Portfolio Data tape into the cassette recorder.
- 2) Rewind the tape to a position where you want the portfolio data to begin. (Be sure not to position the tape on its leader, if it has one.)
- 3) Simultaneously, depress the "PLAY" and "RECORD" keys on the recorder.
- 4) Press ENTER.

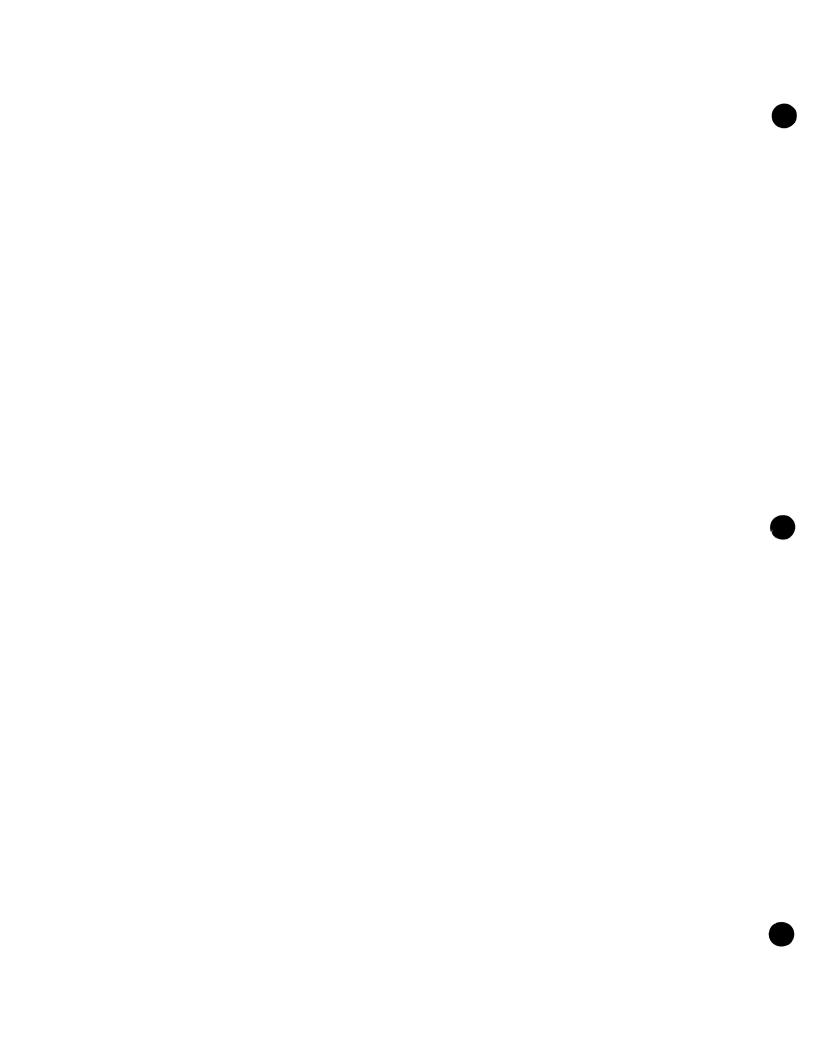
The screen will show:

WRITING TAPE

This will be shown until the entire Data tape has been written. The Main Portfolio Menu will then appear.

Note: It is recommended that at least two copies of the information tape be made after any changes are made to your portfolio. This should be done on separate cassettes or on different sides of the same one.

The date you created the file should be noted on the cassette labels.



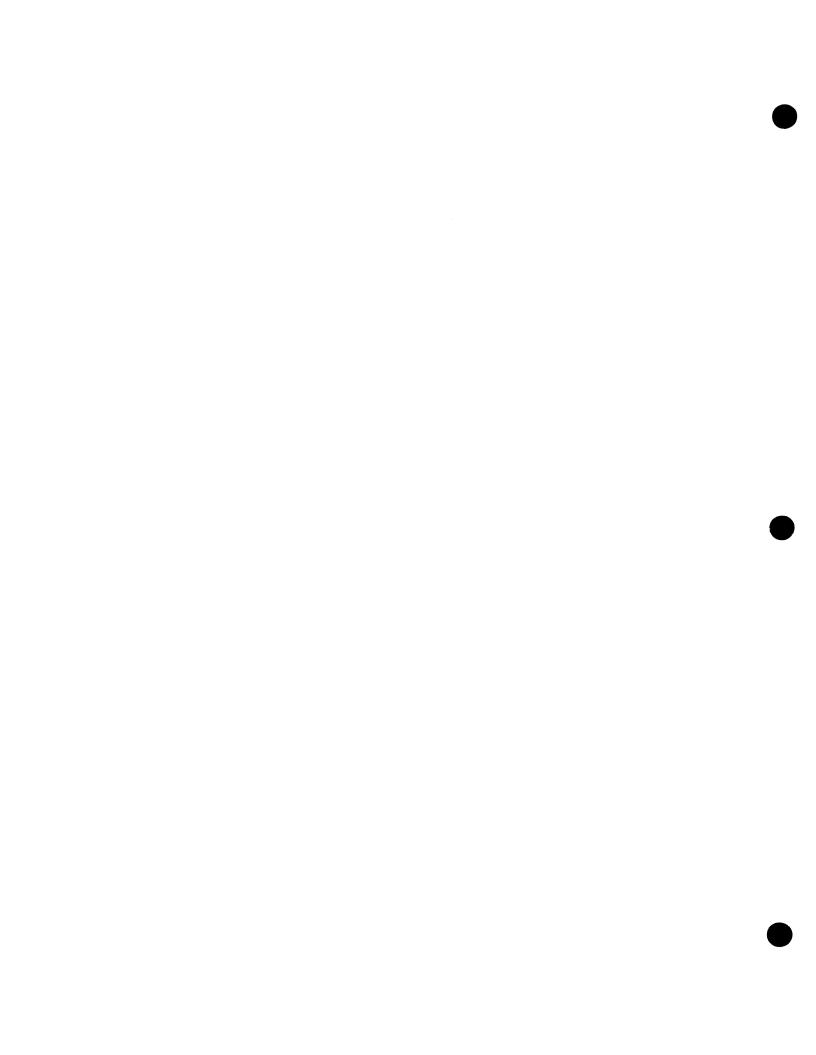
Clearing Yearly Totals

This function clears all sales data for each security. You should do this at the beginning of each year. This is done so the sales information for the current year will not include any information from the previous year. The function will also be required once the maximum number of sales have been entered. If the maximum number of sales have been entered, information regarding sales should be written down before using this procedure. Always save the Data tape.

The screen will show:

CLEAR YEARLY TOTALS? (Y OR N)

To exit the function without clearing yearly totals, press Nor the @key. The Main Portfolio Menu will again be shown.



Ending Properly

Whenever you build a portfolio (as you have just done), it will be lost if you do not write a new Portfolio Data tape before ending the program.

After you have created the Data tape, press @to properly end the session.

The screen will show:

DID YOU SAVE ALL YOUR DATA

ON THE TAPE? (Y OR N)

Press Y.

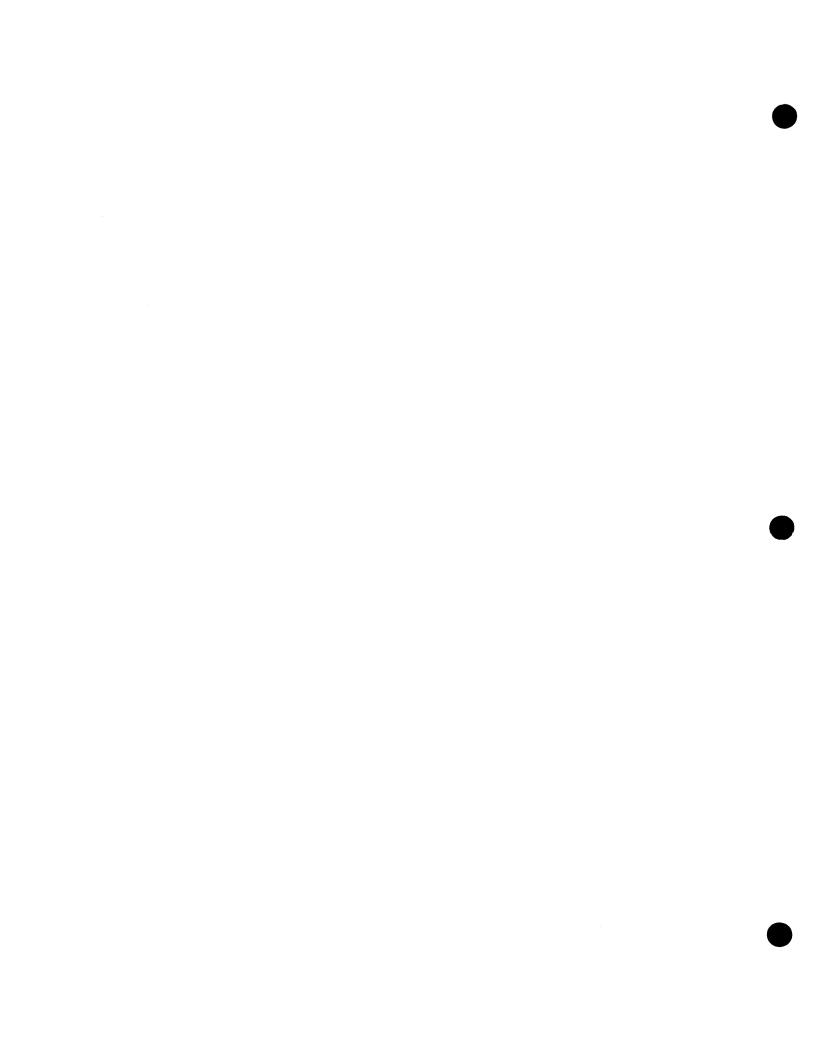
The screen will then show:

END OF MAIN PORTFOLIO PROGRAM

READY

>___

Note: Do not load the tape you have just created into the Transactions Program until you have created your initial Index Data tape (See Index).



Portfolio Reports

Now that the sample portfolio has been placed on the Portfolio Data tape, you are ready to produce reports which analyze your portfolio.

The screen will show:

READY

>__

Perform the following steps:

- 1) Insert the Report Program (Summary) tape in the recorder.
- 2) Rewind the tape.
- 3) Depress the "PLAY" key.
- 4) Type **CLOAD** and press **ENTER**.

The screen will show:

READY

>__

5) Type **RUN** and press **ENTER**.

After the program has loaded, the screen will show:

PORTFOLIO REPORT PROGRAM

LOAD DATA TAPE

SET TO PLAY

PRESS <ENTER> WHEN READY

- 6) Insert the Portfolio Data tape in the recorder.
- 7) Rewind the tape.
- 8) Depress the "PLAY" key.
- 9) Press **ENTER** when ready.

The screen will show:

LOADING DATA TAPE - STAND BY

Portfolio Report (continued)

The date the tape was written will also appear.

When the information on the tape has been loaded into the computer, the Portfolio Report Menu will be shown.

Note: Formulas and definitions for the headings in each report may be found in Appendix A.

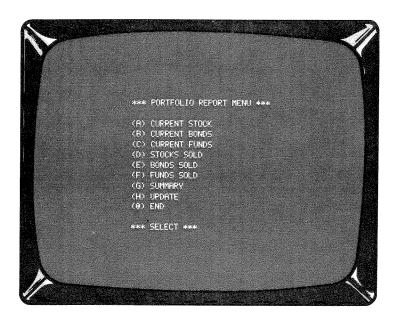
Printing Reports

Make sure the printer is turned on. Press . What is shown on the screen will then be printed. You can obtain a printout from the programs listed below:

- 1) All reports for Summary Program.
- 2) Data Base information in the Index Program.
- 3) All screen displays for Option Program.

Portfolio Report Menu

The screen will show:

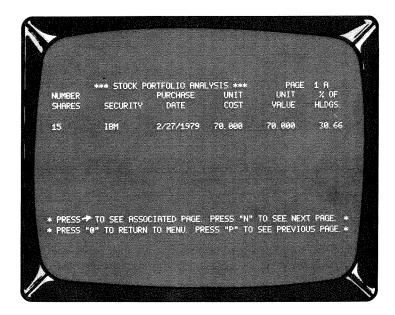


This is what each function does:

(A)	CURRENT STOCK	Shows a summary and analysis of the Stocks in your portfolio.
(B)	CURRENT BONDS	Shows a summary and analysis of the Bonds in your portfolio.
(C)	CURRENT FUNDS	Shows a summary and analysis of the Funds in your portfolio.
(D)	STOCKS SOLD	Shows a summary of key information on Stocks sold this year.
(E)	BONDS SOLD	Shows a summary of key information on Bonds sold this year.
(F)	FUNDS SOLD	Shows a summary of key information on Funds sold this year.
(G)	SUMMARY	Shows an overall analysis of your current portfolio.
(H)	UPDATE	Lets you Update current Stocks, Bonds and Funds.
(@)	END	Lets you End the Portfolio Report Program.

Current Stocks

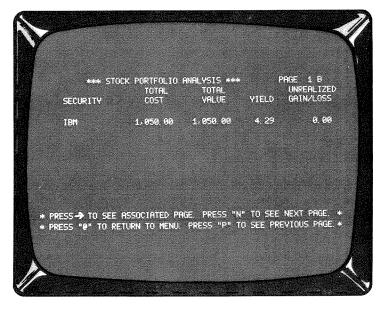
Press A for Current Stock. The screen will show:



Changing Pages

The system allows up to twenty current Stocks and up to three pages or six full screens of information. Each page contains two parts, labeled A and B. Pressing the key will show the next part (B) of the same page. If a % symbol appears in any of the reports, the maximum value (or space) allowed for that item has been exceeded. Pressing Nor Pwill show part A of the Next or Previous page, respectively. Pressing will return the Portfolio Report Menu. Press the key.

The screen will show:

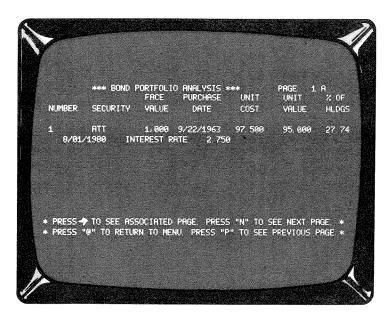


Press@to return to the Portfolio Report Menu.

Current Bonds

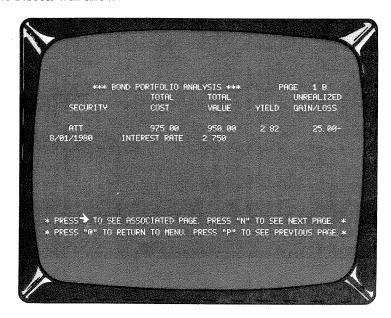
Press B for Current Bonds.

The screen will show:



You may have up to three of these two-section pages. The date of maturity and the interest rate are listed beneath the name of each bond. This information uniquely identifies the bond. The unit cost and unit value are shown as percentages of the face value. Responses at the bottom of the page operate the same as for stocks. Press the Key.

The screen will show:

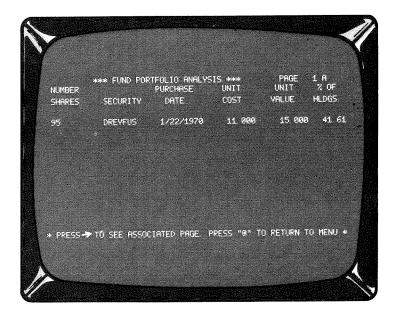


Press@to return to the Portfolio Report Menu.

Current Funds

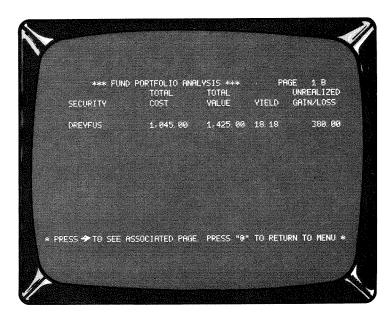
Press C for Current Funds.

The screen will show:



Information on all the current units of funds which may be held at one time (up to 10) will be shown on this two-part page. Press the key.

The screen will show:

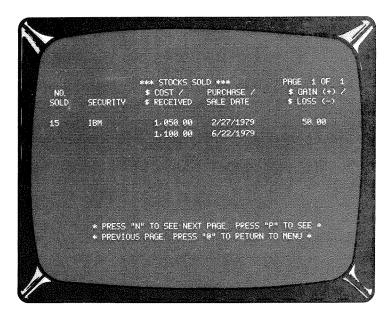


Now, press@to return to the Portfolio Report Menu.

Stocks Sold

Press D.

The screen will show:

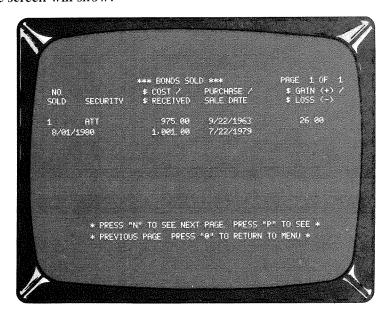


Each entry has two lines which show the purchase and selling prices with their respective dates. Pressing \mathbb{N} or \mathbb{P} will show the \mathbb{N} ext and \mathbb{P} revious pages if there is more than one page of information in your portfolio. Press to return to Portfolio Report Menu.

Bonds Sold

Press E.

The screen will show:



Portfolio Reports (continued)

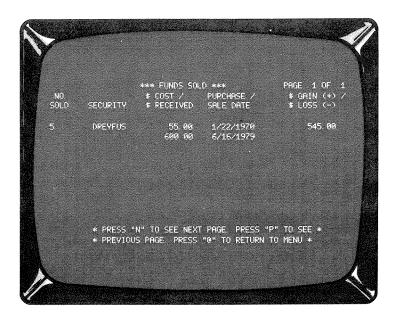
The maturity date appears beneath the name of each Bond. Up to five pages of information may exist.

Press@to return to the Portfolio Report Menu.

Funds Sold

Press F.

The screen will show:

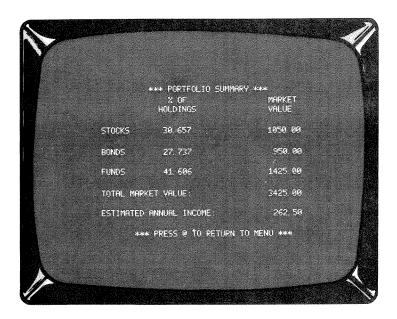


The responses work as previously described for Stocks and Bonds. Press@to return to the Portfolio Report Menu.

Summary

Press G for Summary.

The screen will show:

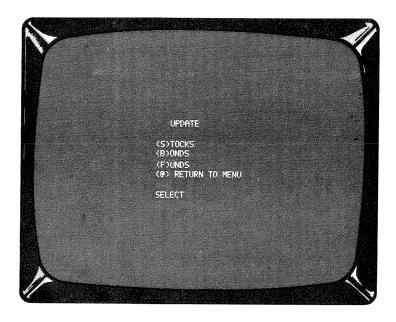


The percentage of holdings are based on the market values shown. The estimated annual income is the total of interest and dividends received annually, based on current information. Press@to return to the Portfolio Report Menu.

Update

Press H to Update.

The screen will show:



The procedures to update in the Summary Program are similar to the Transaction Program. The difference is that Updates in this program are only temporary; therefore, you do not create a Data tape. It allows you to speculate, or examine, the effect of changes on the overall performance of your securities.

Press S for Stocks and then A for IBM.

No update needs to be made at this time, so press **ENTER**. All information will remain the same.

Press **ENTER** again to return to your list of Stocks.

Now, press@to return to the Update Menu.

The procedure for updating is the same for Bonds and Funds.

Continue with the example by pressing again to return to the Portfolio Report Menu.

End Report

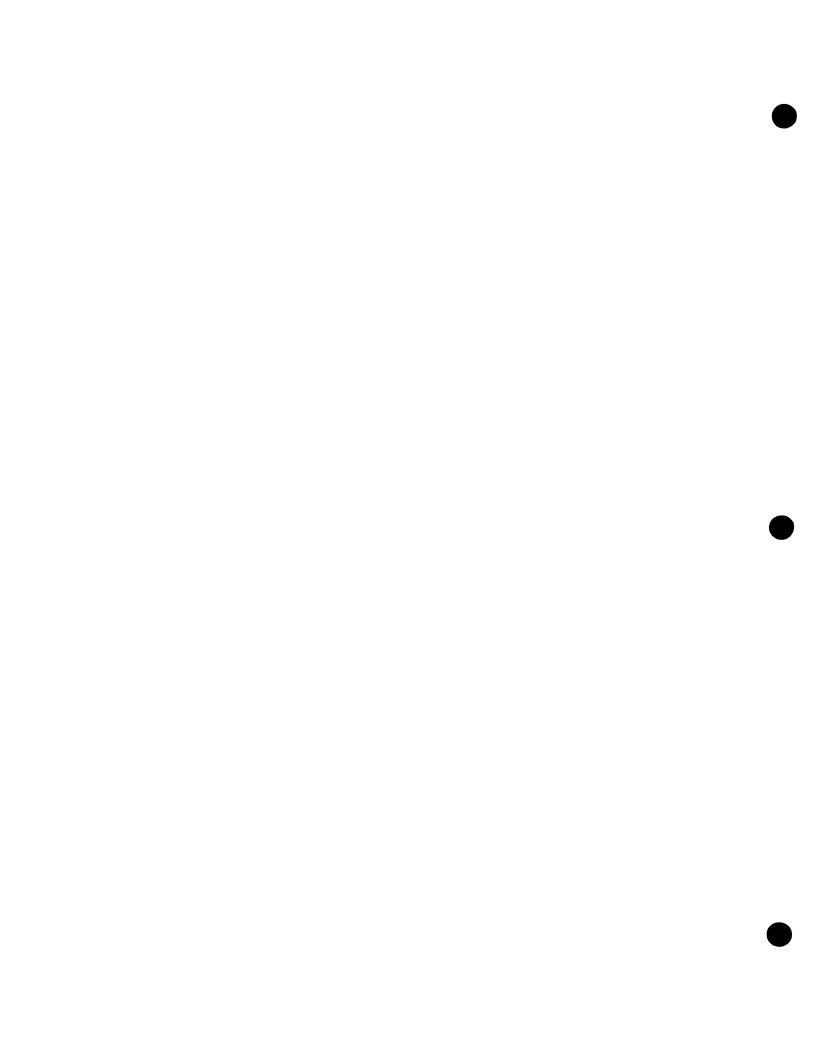
Now that you have seen all the examples, press@to End the Report Review session.

The screen will show:

END REPORT PROGRAM

READY

>_



Graphic Performance Report

This program provides a graphic display which shows the relative performance between the Standard and Poor's Price Index and an index computed for the stock portion of your portfolio. The following steps must be used the first time you create a graph:

- 1) Insert the Index Program tape in the cassette recorder.
- 2) Rewind the tape.
- 3) Depress the "PLAY" key.
- 4) Type CLOAD and press ENTER.

The screen will show:

READY

>__

5) Type **RUN** and press **ENTER**.

The screen will show:

STOCK PERFORMANCE COMPARISON

LOAD PORTFOLIO DATA TAPE

SET TO PLAY

PRESS <ENTER> WHEN READY

Now, follow these steps:

- 1) Insert the Portfolio data tape in the recorder and rewind it.
- 2) Press the "PLAY" key on the recorder.
- 3) Press ENTER.

The screen will show:

LOADING TAPE

Once completed, the screen will show:

WRITE INDEX DATA OUTPUT TAPE SET TO RECORD PRESS <ENTER> WHEN READY

Do the following:

- Insert the blank Index Data tape into the recorder.
- 2) Rewind (make sure the tape is positioned past the leader if it has one).
- Simultaneously press the "PLAY" and "RECORD" keys on the 3) recorder.
- 4) Press **ENTER**.

The program will then ask for the following information:

The screen will show:

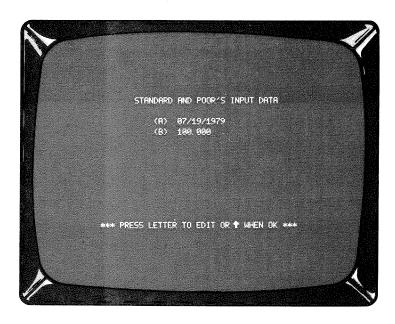
You type:

ENTER TODAY'S DATE____ **Ø7/119/11979** and press **ENTER**

ENTER STANDARD & POOR'S INDEX_____

100.00 and press ENTER

The screen will show:



Press when both entries are correct.

The screen will show:

WRITING TAPE

Once the Index data tape has been saved, the screen will show:

* * * END OF PROGRAM * * *

READY

>__

The program will end at this point.

To obtain a meaningful graph, you must change the value of stocks held. Return to the Transaction section, load the Portfolio Data tape and update the current market value per share of IBM to 77.00. Use a blank cassette to "write" the new Portfolio Data information. (Using this second tape allows the first one to become a "Backup".) When this is done, repeat the steps you have done so far in this section as listed below:

- 1) Insert the Index Program in the cassette recorder.
- 2) Rewind the tape.
- 3) Depress the "PLAY" key.
- 4) Type CLOAD and press ENTER.

The screen will show:

READY

>__

5) Type **RUN** and press **ENTER**.

The screen will show:

STOCK PERFORMANCE COMPARISON

USING STANDARD AND POOR'S 500

LOAD PORTFOLIO DATA TAPE

SET TO PLAY

PRESS < ENTER > WHEN READY

Now, follow these steps:

- 1) Insert the Portfolio Data tape (this time using the updated information.)
- 2) Rewind the tape.

- 3) Press "PLAY" on the recorder.
- 4) Press ENTER.

The screen will show:

LOADING TAPE

After the Portfolio Data Tape has been loaded, the screen will clear and show:

LOAD INDEX DATA TAPE SET TO PLAY PRESS <ENTER> WHEN READY

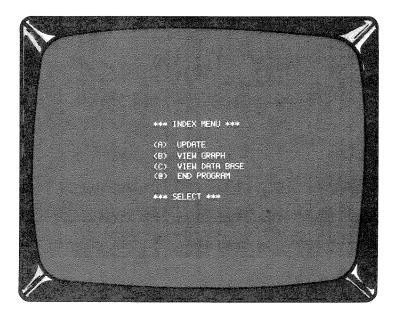
Now, follow these steps:

- 1) Insert the Index Data tape into the recorder.
- 2) Rewind it.
- 3) Depress the "PLAY" key on the recorder.
- 4) Press **ENTER**.

The screen will show:

LOADING TAPE

After the tape is loaded, the screen will show:



The Index Menu and its functions are listed below:

(A) UPDATE Lets you enter the current Standard and

Poor's Index and date, shows the graph,

and saves the Index Data tape.

(B) VIEW GRAPH Shows the graph up to the date when the

Standard and Poor's Index was last entered.

(C) VIEW DATA BASE Shows the data base from which the graph

is computed. The key will printout Data

Base if you have a printer.

(@) END PROGRAM Ends the program. Always end the program

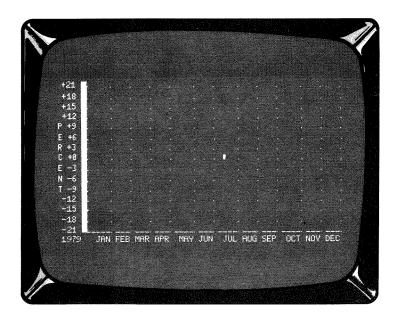
by pressing the @key.

Press B.

The screen will show:

PRESS @ WHEN FINISHED WITH GRAPH

The screen will then show:



This is the first stock performance comparison.

The dots on the graph represent the months in a year (12). Each dash between the months at the bottom of the graph represent each week (7 days) in that month. If your entry in February was in the first week of February it might appear on the graph as the last week in January, depending on how the weeks fall for that year.

The Standard and Poor's Index should be updated each week to insure a meaningful graph.

Updating

Press A, so that you can enter the current Standard and Poor's Index. The screen will request the following information:

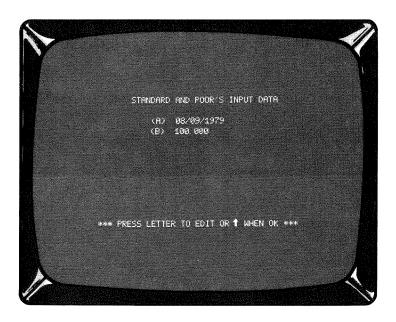
The screen will show: You type:

ENTER TODAY'S DATE ___ **Ø87Ø971979** and press **ENTER**

ENTER STANDARD AND POOR'S INDEX_ _

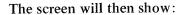
100.00 and press ENTER

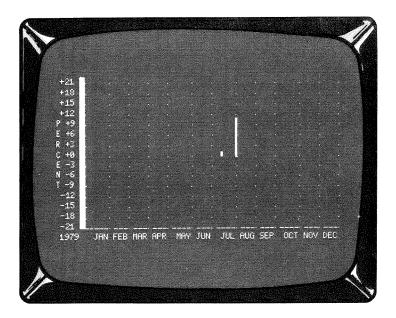
The screen will show:



Press the **!** key when the entries are correct. The following statement will then appear.

PRESS@WHEN FINISHED WITH GRAPH





The dotted line across the graph at the zero level represents the reference line for the percent change in the value of the Standard and Poor's Index. The months will be printed at the bottom of the graph. The lines between the months represent the weeks.

The bars extending from the zero line on the graph represent the difference between the percent change in the Standard and Poor's Index and the percent change in the value of the stock portion of the portfolio.

For Example:

The bar at the 32nd week indicates that the percent change in the value of the portfolio was $1\emptyset$ percent greater than the percent change in the Standard and Poor's Index over the same period. As long as the value of the portfolio is updated and the Standard and Poor's Index is entered only once a week, the bars will provide an overall picture of how the user's portfolio is performing in comparison with the $5\emptyset\emptyset$ stocks used to compute the Standard and Poor's Index. If the difference between the two percentage changes is greater than the vertical scale, an asterisk (*) will be printed where it leaves the screen.

When you are through viewing the graph, press @.

The screen will show:

WRITE INDEX OUTPUT DATA TAPE

SET TO RECORD

PRESS <ENTER> WHEN READY

With the Index Data tape still in the recorder, follow the steps below:

- (1) Rewind the tape. If you wish to save the previous index information, use a new, blank tape.
- (2) Simultaneously depress the "PLAY" and "RECORD" keys on the recorder.
- (3) Press **ENTER**.

The screen will show:

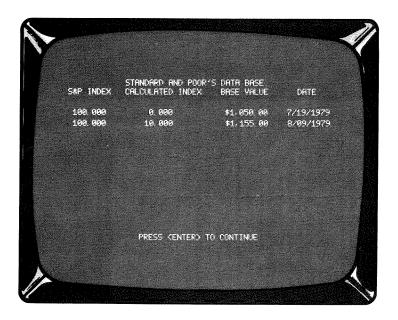
WRITING TAPE

When completed, the Index Menu will reappear.

Viewing the Data Base

Press Cto show the Data Base.

The screen will show:



If you have more than 10 lines of data, press **ENTER** to see the next page. If you are on the last page, press **ENTER** to return to the Index Menu. Press to End the program.

You have now completed a basic investment portfolio program. We have included the Options program because of the increased popularity of this form of investing. You may choose to continue through the Options Program using the information provided or return to the Transaction program and start over, using your own information.

You will find the system to be a valuable tool which allows you to view your holdings and perform various transactions, with a minimum amount of time and trouble.

Options

Options have become a popular form of investing during the last few years.

They are more complex and require different information than the other three types of securities. For this reason you need an Option Data tape in addition to the Portfolio data tape. (See Appendices B and C for a further explanation of Options and their terminology.)

Options pay no dividends, but they do allow the investor to control a large amount of Stock over a period of time. This feature makes Options attractive to investors as well as speculators. The novice, however, should understand the concepts of Options thoroughly before investing.

We will describe Puts and Calls as being Bought and Written. Bought means an Option (Put or Call) originally purchased (you paid money for it); written means you were originally paid for an option (Put or Call).

Using the Option Program

To add Options to your portfolio, follow these steps:

- (1) Insert the Option Program tape in the cassette recorder.
- (2) Rewind the tape.
- (3) Press the "Play" switch.
- (4) Type **CLOAD** and press **ENTER**.

The screen will show:

READY

(5) Type **RUN** and press **ENTER**.

The screen will show:

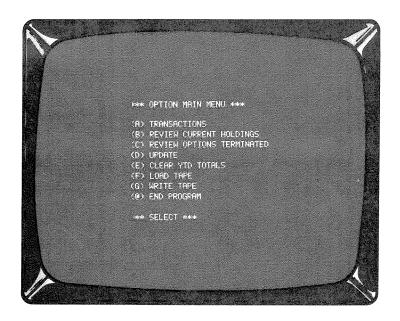
OPTION PROGRAM

ENTER TODAY'S DATE !!!!!!!!

Type today's date and press **ENTER**.

Option Main Menu

The screen will show:



This is what each function does:

(A)	TRANSACTIONS	Shows the Option Transactions Menu from
		which you may begin or end transactions
		for Options entered.

(B)	REVIEW CURRENT	
	HOLDINGS	Shows all the Options you hold, along with
		current information

(C)	REVIEW OPTIONS	
	TERMINATED	Shows Options that have been closed,
		exercised or expired.

(D) UPDATE	Lets you update the current market quote
	for your Options.

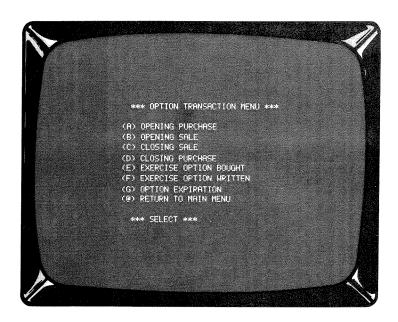
(E) CLEAR YTD TOTALS	Lets you clear all Options that have been
	closed, exercised or expired.

(F) LOAD TAPE Loads Data tape previously write
--

Press A for Transactions.

(@) RETURN TO MAIN MENU

The screen will show:



Each function of the Option Transaction Menu will be understood more fully as you continue with the examples in this section. The function of each feature is stated briefly below:

(A)	OPENING PURCHASE	Lets you "buy" a Put or Call Option. You will be prompted to enter the information needed.
(B)	OPENING SALE	This function lets you write (sell) a Put or Call Option.
(C)	CLOSING SALE	This is one of three ways in which a Put or Call Option BOUGHT may be ended.
(D)	CLOSING PURCHASE	This is one of three ways in which a Put or Call Option WRITTEN may be ended.
(E)	EXERCISE OPTION BOUGHT	Exercising a Put or Call BOUGHT involves the purchase of your stock Option.
(F)	EXERCISE OPTION WRITTEN	The exercise of a Put or Call WRITTEN means you will have to deliver your stock.
(G)	OPTION EXPIRATION	This feature is provided for terminating Put or Call Options (both BOUGHT and WRITTEN) that have expired.

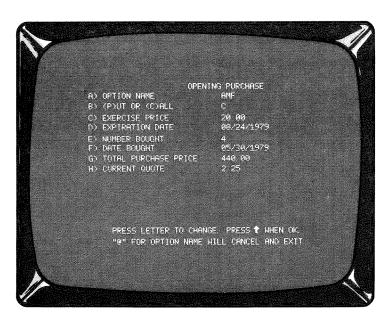
Returns you to the Option Main Menu.

Opening Purchase (Buying an Option)

To buy a sample Option, press A, the screen will clear, and at the bottom, you will enter information about your purchase in response to the prompts.

The screen will show: You type: OPTION NAME_ _ _ _ _ AMF and press ENTER (P)UT OR (C)ALL_ _ _ C and press **ENTER** EXERCISE PRICE_____ 20.00 and press ENTER EXPIRATION DATE_____ **Ø8/24/1979** and press **ENTER** NUMBER BOUGHT (SOLD)____ 4 and press **ENTER** DATE BOUGHT (SOLD)_____ **Ø5/30/1979** and press **ENTER** TOTAL PURCHASE (SELLING) PRICE__ 440.00 and press ENTER CURRENT QUOTE_ _ _ _ _ 2.25 and press ENTER

If everything was entered properly, the screen will now show:



The system assumes that 100 shares of the underlying security are subject to an Option contract. Press when all entries are correct.

Opening Sale (Writing an Option)

Press (for Transactions) from the Option Main Menu. Press (b) to write an Option. Enter the information provided below for an Opening Sale.

The screen will show:	You type:
OPTION NAME	AMF and press ENTER
(P)UT OR (C)ALL	C and press ENTER
EXERCISE PRICE	20.00 and press ENTER
EXPIRATION DATE	Ø8/24/1979 and press ENTER
NUMBER BOUGHT (SOLD)	4 and press ENTER
DATE BOUGHT (SOLD)	Ø5/ 3 Ø/ 1 979 and press ENTER
TOTAL SELLING PRICE	440.00 and press ENTER
CURRENT QUOTE	2.25 and press ENTER

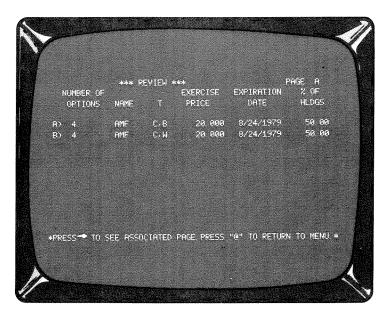
Press when all entries are correct and you are returned to the Option Main Menu.

Note: When the file is full (10 entries), a Closing Sale must be made before an Opening Sale can be made.

Reviewing Your Holdings

To review the purchase you just made, press®from the Option Main Menu.

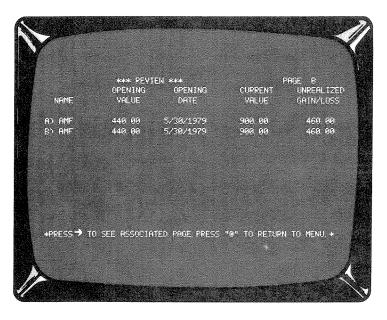
The screen will show:



This is a part "A" of a two-part display.

Each current Option is shown beside a letter (A-J) on the left. Note the column heading \top (for Type). Under it, you will find two letters separated by a comma. The first indicates a Put or Call option (P or C), while the second shows if the Option was Written or Bought (W or B). Press the key to show part B.

The screen will show:



The unrealized Gain/Loss column shows how much would be gained or lost if a closing purchase, or sale, were to be made at this time. Press@to return to the Option Main Menu.

Updating Your Options

To update the current quote of an Option, press prom the Option Main Menu. The current Options will appear on the screen. Press for AMF. This is the Option group of stocks you will update.

When the screen clears, the name, type, exercise price and expiration date of the Option group of stocks chosen will appear at the top of the screen, along with:

CURRENT QUOTE 2.25___

Type 2.5 and press **ENTER**. (If you press **ENTER** without typing a number, the value will remain as it was.) Press to enter the new quote and return to the Option Main Menu.

Terminating Options

Since an Option bought or written may be ended in three ways, you should go through an example of each, beginning with a Closing Sale.

Closing Sale (For Options Originally Bought)

Press A for Transactions from the Options Main Menu. Then press C for Closing Sale from the Option Transactions Menu. The current Options will appear with CLOSING SALE shown at the top.

If you want to return to the Option Transactions Menu, simply press @. For now, continue with the example.

To sell AMF, press **A**. The screen will again show CLOSING SALE at the top. Three pieces of information will then be requested at the bottom of the screen regarding the sale.

The screen will show:	You type:
NUMBER SOLD	1 and press ENTER
TOTAL AMOUNT RECEIVED	120.00 and press ENTER
DATE SOLD	Ø [7][/][3][Ø][7][9][7][9] and press ENTER]

The number of Options held is decreased by the number sold (closed). The opening value is then lowered proportionally to the number remaining when you press ①. You are then returned to the Options Main Menu.

If you attempt to sell more options than you hold, the screen will show an "Error" message. You should then review your holdings and re-enter the appropriate amount.

Closing Purchase (For Options Originally Written)

Press A from the Option Main Menu. Press D to close a purchase. This time press the letter for your choice of securities. Follow the steps described below.

* * * CLOSING PURCHASE* * * will be shown at the top of the screen.

The screen will show: You type:

NUMBER BOUGHT 1 and press ENTER

TOTAL AMOUNT PAID 120.00 and press ENTER

DATE BOUGHT **Ø7/30/1979** and press **ENTER**

Exercising an Option Bought

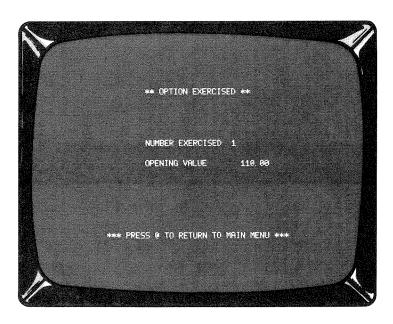
Press A from the Option Main Menu. Then press E to Exercise an Option Bought. The current Options held will then be shown on the screen. Press for the Option group to be exercised. The name, exercise price and the expiration date of the option will appear at the top of the screen. Enter the following information as it is requested at the bottom of the screen.

The screen will show: You type:

NUMBER EXERCISED_ _ _ 1 and press ENTER

Press when both entries are correct.

The screen will show:



Press@to return to the Option Main Menu. For Options exercised, the closing value and gain/loss are set to zero. Exercising an Option bought involves the purchase of stock, so when entering your own information you may want to run the stock program (Transactions) to update your holdings.

Exercising an Option Written

Press A from the Option Main Menu. Press F to exercise a written option. This time choose B for the security. The top of the screen will now show:

* * *EXERCISE OPTION WRITTEN* * *

The exercise of an Option written means you will have to deliver your stock, so you may again want to run the stock program, "Transactions", to update your holdings.

The screen will show:	You type:
NUMBER EXERCISED	1 and press ENTER
CLOSING DATE	Ø6 /23/1979 and press ENTER
Press when both entries are correct.	
Now press@to return to Main Menu.	

Options (continued)

Option Expiration (For Options Both Bought and Written)

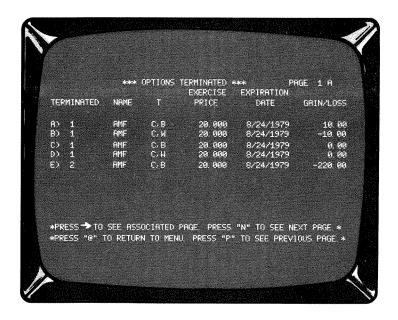
Press [A] from the Option Main Menu. Then, press [G] for Option Expiration from the Option Transactions Menu. The screen will show all current options. Press [A]. The Option AMF has expired, so the system will close the Option and return to the Main Menu. If the Option was "Bought", the closing value will be set to zero and the gain/loss will be set to the purchase value as a loss. If the Option was "Written", the closing value and the gain/loss will all be set equal to the opening value as a gain.

Let's review the Options that have been terminated.

Reviewing Options Terminated

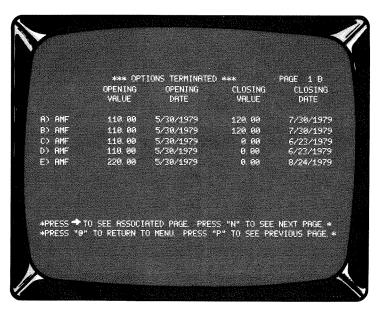
Press [C] from the Option Main Menu.

The screen will show:



This display could consist of up to five pages, with each page having two parts, (A and B). To see the associated part (A or B), press .

The screen will show:



To view the next page set, press N. To review the previous page, press P. This concludes the Option example. Press to return to the Option Main Menu. If you wish to save the sample options, follow the instructions in the "Write Tape" section below.

Writing the Option Tape

You will want to save the new data on the Option Data tape each time you buy, update, or terminate an Option. To do so, press from the Option Main Menu.

The screen will show:

WRITE OPTIONS DATA TAPE

SET TO RECORD

PRESS <ENTER> WHEN READY

Follow these steps:

- 1) Place the Option Data cassette into the recorder.
- 2) Rewind the tape. Position the tape past the leader if it has one.
- 3) Press both the "PLAY" and "RECORD" keys.
- 4) Press ENTER.

The screen will then show:

WRITING DATA TAPE - STAND BY

Once written, the Option Menu will again be shown.

Note: It is advisable to make two copies of all new Option information.

Loading the Option Data Tape

Options in your portfolio will be kept on the Option Data tape. When the Option Main Menu appears on the screen, press F to Load Tape.

The screen will show:

LOAD OPTIONS DATA TAPE

SET TO PLAY

PRESS <ENTER> WHEN READY

At this point, you may return to the Option Main Menu by pressing the @key. Otherwise, perform the following steps:

- (1) Insert the Option Data cassette into the recorder.
- (2) Rewind the tape.
- (3) Press the "PLAY" key.
- (4) Press ENTER.

The screen will show:

LOADING DATA TAPE - STAND BY

It will also show the data tape date.

Once the tape has been loaded, the Option Main Menu will again be shown.

Clearing Year-to-Date Totals

Press E from the Option Main Menu.

The screen will show:

ARE YOU SURE? (Y/N)

If you have saved your updated information, press Y. If you have not saved the updated information or if you have accidentally pressed the wrong letter, pressing N will return you to the Option Main Menu without changing any information.

End Program

Press@from the Options Main Menu.

The screen will show:

DID YOU SAVE ALL YOUR DATA ON TAPE? (Y/N)

Pressing \P for \underline{Y} es will end the program. If you press \P you will be returned to the Option Main Menu. Press \P .

The screen will show:

END OF OPTION PROGRAM

READY

>_

Appendix A-Explanation of Column Headings and Entries

Explanation of Column Headings and Entries

FACE VALUE The value of a Bond that appears on the

face of the Bond, unless the value is otherwise specified by the issuing company. Face value is ordinarily the amount the issuing company promises to

pay at maturity.

GAIN/LOSS (Total amount received when sold) minus

(Total cost when bought)

MATURITY DATE

The date on which a Bond or certificate of

indebtedness comes due and is to be paid

off.

PERCENTAGE OF HOLDINGS (Total current market value of the

particular security) divided by (Total current market value of all Stocks, Bonds

and Funds in the portfolio).

QUOTE (BONDS)

The price of a Bond, stated as a percentage

of its face value.

TOTAL COST Total purchase price as entered by user.

TOTAL VALUE (Number of shares held) multiplied by

(STOCKS AND FUNDS) (Current market value/share)

TOTAL VALUE (BONDS) (Number held) multiplied by (Current

quote divided by 100) multiplied by (Face

value)

UNIT COST (Total purchase price) divided by (Number

of shares held)

Note: In the case of Bonds, this value is given as a percentage of the face value of

the bond.

UNIT VALUE Current market value, or quote per unit,

entered by the user.

YIELD (Amount of money to be received annually

from interest and dividends) divided by

(Total Purchase Price).

Appendix B-Options

Options

An Option is a contract allowing the holder to buy or sell (depending on whether it is a Call or Put, respectively) a given amount of stock (usually 100 shares) at a specific price during a specific period of time, regardless of the market price of that stock.

The pieces of information needed to uniquely identify an Option are: the name of the underlying security, the type (Put or Call), the exercise price and the expiration date. As with any contract, the two sides involved are the buyer and the seller. In this case the seller of an Option contract is called the "writer". The unique feature of Option contracts is that they are traded over selected Option exchanges. As the price of the stock fluctuates, the value of the Option will fluctuate, but usually at a faster percentage rate of change than the stock price. The value of an Option is dependent on the market value of the underlying stock, the time remaining until the expiration date and the volatility of the stock. Options are listed in a special section of stock quotation pages of most major newspapers. The price paid for an Option is called the "premium" and is stated per "share". The buyer pays the premium, the writer gets the premium (less commissions in both cases). All traded options are for 100 shares, so the total price is 100 times the quoted premium.

Once an option contract has been originated, three possible outcomes exist: the option may expire, an exercise notice may be received, or a closing transaction may be undertaken. Listed below are explanations for each of the possibilities.

- An option expires when the termination date has passed. For an Option bought the buyer will have a loss equal to his purchase cost of the Option.
 For an Option written, the writer will have a gain equal to the premium he received when he wrote the Option.
- 2) An Option is exercised when the Option buyer "exercises" his right to purchase (if a Call Option) or sell (if a Put Option) the Option writer's shares at the Option exercise price.
 - When the buyer exercises an Option he has no gain or loss on the Option and the Option becomes part of the purchase (or sale) value of the stock. The Option writer also has no gain or loss. The income from writing the Option becomes part of total sale price of the shares. Therefore the Option program will show no gain or loss when an Option is exercised. Since exercising an Option involves a Stock purchase or sale, you should use the Stocks Transaction Program to complete your records.
- A closing transaction consists of selling or rebuying the Option. An Option bought can be sold at any time prior to the expiration date. The gain or loss is calculated just as in the purchase of a stock and is the selling price less the purchase price. An Option written can be bought back if the writer wants to avoid having the option exercised. The gain or loss is calculated as the original value received less the cost to re-buy the Option.

Appendix B-Options (continued)

The key point to remember is that Options can be either written or bought and that three different outcomes are possible under each. Before engaging in the purchasing or writing of any Options, be sure you understand all your rights and obligations. Obtain information from a broker or tax advisor concerning transaction and commission charges and tax considerations.

A broker can supply detailed information on strategies to consider when entering the Option market. The purpose of this system is to provide key information regarding the Option contracts entered. The Glossary in Appendix C may be of assistance in clarifying some of the terminology used.

Appendix C-Option Glossary

Option Glossary

CALL An Option contract which entitles the buyer to

buy a given number of the underlying shares of Stock, at a given price, within a given period of

time.

CLOSING PURCHASE A transaction in which the holder of an Option

previously "written", liquidates his position by purchasing an Option with the same terms as the

one written.

CLOSING SALE A transaction in which the holder of an Option

previously "purchased", liquidates his position by "selling" an Option with the same terms as

the one purchased.

EXERCISE PRICE The price at which the underlying security may

be bought or sold by exercising the Option.

EXPIRATION DATE The last day the Option may be exercised.

OPENING PURCHASE The purchase of an Option by an investor.

OPENING SALE The writing of an Option by an investor.

PREMIUM The Option price per share.

PUT An Option contract which entitles the seller to

sell a number of shares of stock at a given price,

within a given period of time.

WRITER The seller of an Option contract.

Appendix D-Option Error Messages

Option Error Messages

CLOSED OPTIONS

CURRENT FILE FULL The current Options are held. No more

may be added until one Option is closed,

exercised, or has expired.

TERMINATED FILE FULL Thirty-five Options have been closed, exercised,

or expired. The clear YTD totals function must be executed in order to place more Options in

the terminated section.

NO CURRENT OR This display will appear when, upon the

> completion of loading a tape, no Options were actually entered; this signifies possible problems

with stored information.

NO CURRENT OPTIONS This will appear whenever an attempt is made to

engage in any function requiring current Options

and none exist.

NO CLOSED OPTIONS This will appear whenever an attempt is made to

engage in a function requiring terminated

This will appear whenever the user attempts to

Options and none exist.

YOU HAVE TRIED TO This will appear whenever an attempt is made to

CLOSE # OPTIONS close more Options than held in the group

THIS GROUP chosen.

YOUR TRANSACTION

CONTAINS ONLY #.

CHOICE IS

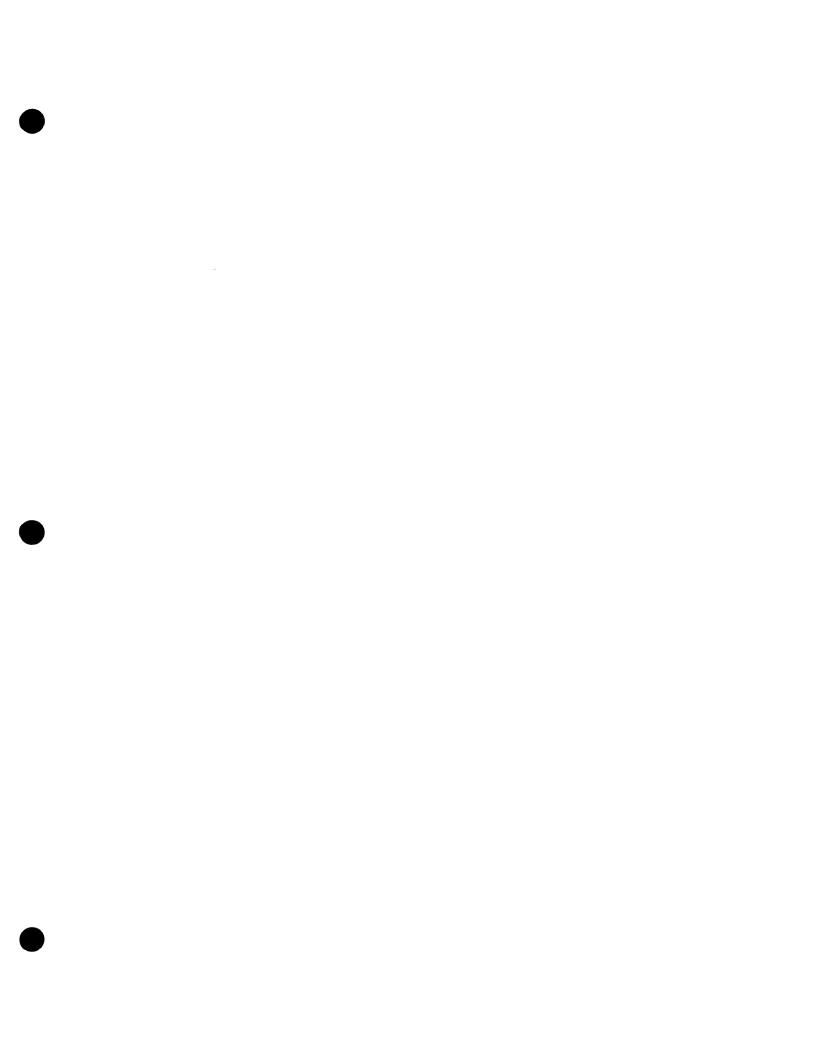
enter a closing sale (purchase) or exercise an Option bought (written) routine and chooses an INCOMPATIBLE WITH

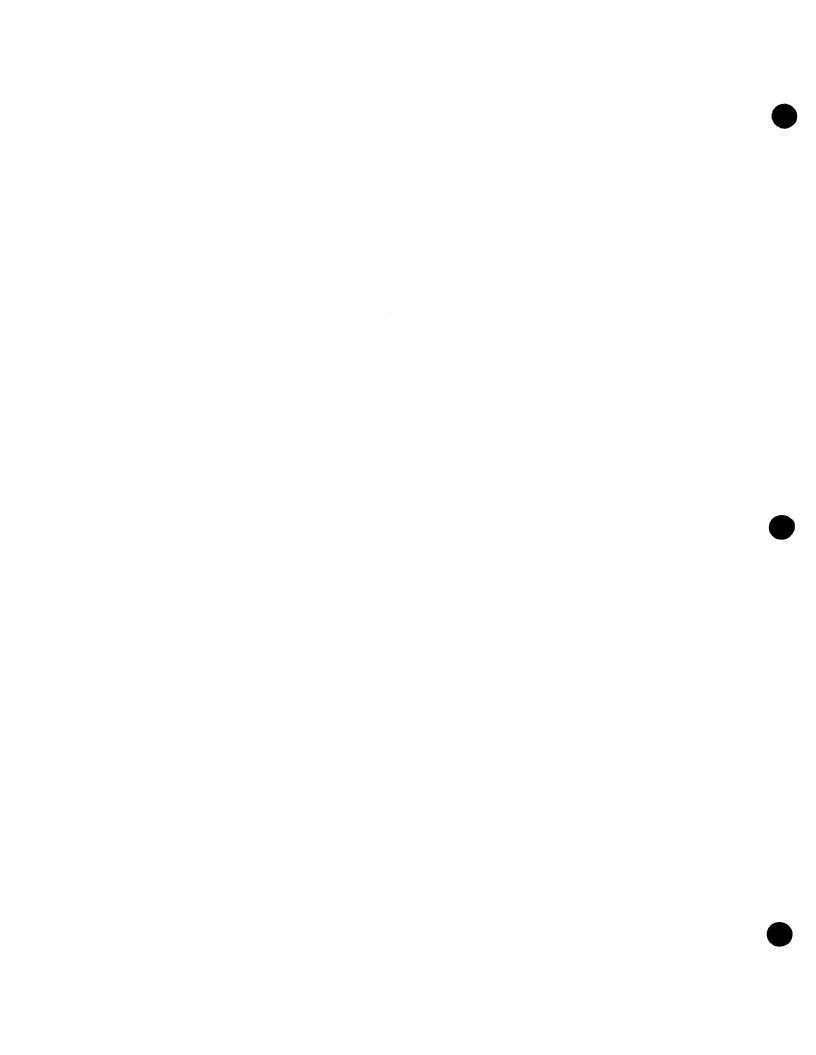
THE OPTION CHOSEN

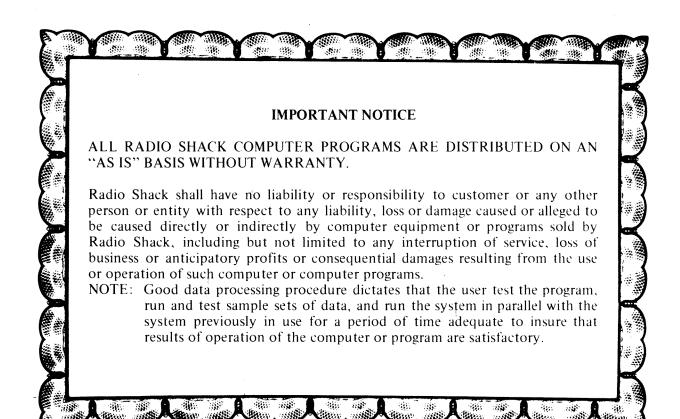
Option written (bought).

Appendix E-Setup Steps for Cassette Portfolio

Setup for Stocks, Bonds, Funds and Options PORTFOLIO INFORMATION 1 and 8 **TRANSACTIONS** - STOCKS **PROGRAM** - BONDS - FUNDS 2 and 9 7 PORTFOLIO DATA **TAPE** (11) 3 (5) and (10) **INDEX DATA** SUMMARY INDEX **TAPE PROGRAM PROGRAM (6) (4)** (12) (13) SUMMARY **STD & POORS STD & POORS ANALYSIS** INDEX **DATA BASE** AND **REPORT GRAPH REPORTS OPTION** 2 **OPTIONS ANALYSIS OPTIONS INFORMATION PROGRAM** AND **REPORTS** 3 **OPTIONS DATA** TAPE







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